**Problems to think about**

**Geometry**

September 8, 2008

1. List 10 possible combinations you could get with four darts. The numbers on the targets are 7-5-3-1. Try to establish some logical method of doing this.
2. Compare different pay scales. Decide if it is better to receive $300 a week or to be paid hourly at a rate of $7.50 per hour. What factors could affect your decision?
3. Three watermelons and two cantaloupes weigh 32 pounds. Four watermelons and three cantaloupes weigh 44 pounds. All watermelons weigh the same and all cantaloupes weigh the same. What is the weight of two watermelons and one cantaloupe?
4. Sylvester measured his pulse and found that his heartbeat at a rate of 80 beats a minute at rest. At this rate, how many days will it take for his heart to beat 1,000,000 times? Show your work and be sure you explain each step.
5. Conrad's Taxi Service charges $1.50 for the first mile and $.90 for each additional mile. How far could Mr. Kelp go for $20 if he gives the driver a $2 tip?
6. Regina has received a pet rabbit from her neighbor Rodney who is about to move to an apartment that does not allow pets. Her father is going to help her build a run for the rabbit in their back yard, but he wants Regina to design it.   
   Regina sits down to think about the possibilities. Her father says that the run must be rectangular with whole number dimensions. If they want to enclose 48 square feet, how many options do they have?
7. Groups of campers were going to an island. On the first day 10 went over and 2 came back. On the second day, 12 went over and 3 came back. If this pattern continues, how many would be on the island at the end of a week? How many would be left?
8. A bat ate 1050 dragon flies on four consecutive nights. Each night she ate 25 more than on the night before. How many did she eat each night?
9. A team of scientists found that there were 4 oak trees for every 10 pine trees. How many oak trees were there if they counted 36 more pine than oak?
10. Four friends buy 36 cookies for $12. Each person contributes the following amount of money:

Tom--$2   
Jake--$3   
Ted--$4   
Sam--$3

Each person gets the number of cookies proportional to the money paid. Draw a circle graph to represent the amount of cookies each got.  
Draw another circle graph to show how many each would have if Ted gives half of his cookies to Tom.

1. In the old days, there were elevator operators to transport passengers. Don Downs always started his day in the basement. He went up 20 floors to take his boss some coffee. Then he went down eight floors to take Danish to his friend. He went up seven floors to check things out. This was the halfway point in the building. How many floors are in this building? Draw a diagram to show how you would figure this out.